

**What is claimed is:**

1        1(currently amended).        A direct sequence code division multiple access  
2        receiver comprising:  
3            an adaptive filter controlled by an adaptive algorithm for filtering data  
4        which has been multiplied by a spreading code and filtered by a channel filter;  
5        ~~the~~  
6            wherein the adaptive filter ~~has~~ ~~having~~ a length appropriate to model an  
7        ~~the~~ inverse of the channel filter; ~~the~~ and,  
8            a multiuser detector operating on an ~~the~~ output of the adaptive filter,  
9        wherein the adaptive filter is trained by new information at a chip rate at  
10       which chip rate the spreading code is input .

1        2(original).        A receiver according to claim 1, wherein the algorithm is trained  
2        using the signal of a desired user.

1        3(previously presented).        A receiver according to claim 1, wherein the  
2        algorithm is trained using a composite signal from more than one user.

1        4(previously presented).        A receiver according to claim 1, wherein the  
2        multiuser detector is of the minimum mean squared error type.

1        5(previously presented).        A receiver according to claim 1, wherein the  
2        multiuser detector is of the zero forcing (decorrelating) type.

1        6(previously presented).        A receiver according to claim 1, wherein the  
2        multiuser detector is of the Volterra type.

1        7(previously presented).        A receiver according to claim 1, wherein the  
2        multiuser detector is of the Radial Basis Function type.

1 8(previously presented). A receiver according to claim 1, wherein the  
2 multiuser detector is of the cancellation type.

1 9(previously presented). A receiver according to claim 1, wherein the  
2 multiuser detector is of the near optimum decoding type.

1 10(previously presented). A receiver according to claim 1, wherein the  
2 algorithm comprises the least mean squares algorithm.

1 11(previously presented). A receiver according to claim 1, wherein the  
2 algorithm comprises the recursive least squares algorithm.

1 12(previously presented). A receiver according to claim 1, wherein the  
2 algorithm comprises the fast a-posteriori or sequential technique algorithm.

1 13(previously presented). A receiver according to claim 1, wherein the  
2 algorithm comprises the stabilised fast a-posteriori error sequential technique  
3 algorithm.

1 14(previously presented). A receiver according to claim 12, wherein said  
2 algorithm is used in combination with the Fast Newton algorithm.

1 15(previously presented). A receiver according to claim 13, wherein said  
2 algorithm is used in combination with the Fast Newton algorithm.

Claim 16 is canceled.